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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,995	02/26/2004	Junichi Hara	MEI-102	2682
24956	7590	08/03/2007	EXAMINER	
MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			MYINT, DENNIS Y	
		ART UNIT	PAPER NUMBER	
		2162		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/785,995	HARA ET AL.	
	Examiner	Art Unit	
	Dennis Myint	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 May 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 19-23, 25, 26, 28-31, 33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 19-23, 25, 26, 28-31, 33 and 34 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 February 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to Applicant's Amendment, filed on 21 May 2007.
2. Claims 19-23, 25, 26, 28-31, 33 and 34 are pending in this application. Claims 19, 28, and 29 and 48 are independent claims. In the Amendment filed on 21 May 2007, claims 24, 27, and 32 were cancelled. Claims 19-21, 25, 26, 28, 29, 33, and 34 were amended. This office action is made final.
3. In light of the amendments made to claims 19-34, rejection of said claims under 35 U.S.C. 101 is hereby withdrawn.

Response to Arguments

4. The applicant's arguments filed on 21 May 2007 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to

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a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 19, 21-23, 25, 28, 29, 30, 31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dettinger et al., (hereinafter "Dettinger") (U.S. Patent Application Publication Number 2003/0093413) in view of Pherson et al., (hereinafter "Pherson") (U.S. Patent Application Publication Number 2002/0095602).

As per claim 19, Dettinger is directed to a computer system and teaches the limitations:

"an access history management device and a plurality of information resource management devices coupled to a storage device and to a client computer" (Figure 1A: *Access Manager 109*; Figure 1A, 114, 115₁, 115₂, 115_N, , and Paragraph 0021, i.e., a *network connection 114* ; Figure 1B: *Server 126₁, 126₂, and 126_N* and Paragraph 0021, i.e., a *plurality of client computers*; and Figure 1B: *Target Database 128₁, 128₂, and 128_N*. Note that said plurality of client computers operate both as resource management

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devices and clients as in *Each of the client computers 120 includes a database management system 125₁,...,125_N (collectively referred to as the database management systems)*,

"the information resource management devices record access requests for obtaining data received from one of the client computers and the information resource management devices as access history information, when the information resource management devices send data to the client computers and the information resource management devices" (Dettinger, Paragraph 0021, i.e., *comprising a receiving server 126₁, 126₂, ... 126_N (collectively referred to as the receiving servers 126)*; Figure 1A: Server 106; Figure 1A: Access Manager 109; Figure 1A: Log 111),

"the access history management device collects the access history information from the plurality of the information resource management devices" (Figure 1A: Access Manager 109, and Paragraph 0025, i.e. *To this end, various information (referred to herein as access manager metrics) is recorded by access manager 109 in a log 111;*), "and the access history information indicates a source of an access request" (Paragraph 0025, i.e., *the access manager metrics include when a database request was issued, when the request was processed, the frequency of request from particular client, etc.*),

"the access history management device determines, on the basis of the source of an access request in the access history information" (Paragraph 0027, i.e., *the replication schedule may be automatically generated by the access manager 109 according to the rules 110 and the metrics contained in the log 11*), "if data is

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requested (with a user ID) from a first one of the information resource management devices other than an information access management device which is coupled to one of the storage devices storing the requested data, (after an access request data is sent with said user ID from a second one of the information resource management devices) and sends an instruction to copy the requested data based on the determination"

(Figure 1A: Server 106; Paragraph 0025, i.e., *the access manager metrics include when a database request was issued, when the request was processed, the frequency of request from particular client, etc.* ; Paragraph 0026, i.e., *Illustrative threshold criteria 112 which may be checked by the rules 110 include time of day used, volume used, frequency of use, user class (e.g., managers, architects, users with read only access etc.) and user class tolerance of data latency; and* ; Paragraph 0027, i.e., i.e. *the replication schedule may be automatically generated by the access manager 109 according to the rules 110 and the metrics contained in the log 111* ; Figure 1A: Storage 118 and Paragraph 0023 i.e., *such as fixed drives*), and

"any of said information resource management devices that is coupled to a storage device that stores the requested data and receives the instruction to copy sends the requested data to said first information resource management device to store the requested data on another one of the storage devices which is coupled to the first information resource management device" (Dettinger Paragraph 0021, i.e., *comprising a receiving server 126₁, 126₂, . . . 126_N (collectively referred to as the receiving servers 126)* ; Paragraph 0010, i.e., *automatically replicating source data from a source data to target databases*; Paragraph 0023, i.e., *Storage 118 is preferably a direct access*

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*storage device (DASD), although it is shown as a single unit, it could be a combination of fixed and/or removable storage devices, such as fixed disc drives, floppy disc drives, tape drives, removable memory cards, or optical storage. Memory 117 and storage 118 could be part of one virtual address space spanning **multiple primary and secondary storage devices**).*

Dettinger does not explicitly teach the limitations: "with a user ID" and "after an access request data is sent with said user ID from a second one of the information resource management devices".

Pherson teaches the limitations:

"with a user ID"(Pherson, Abstract, i.e., *Resource users that have not previously logged in to a particular resource supply identification information to the resource provider, which places the information in a 'not yet approved entity' table. The 'not yet approved entity' table is made available to a management station. An administrator, using the management station, then determines whether to authorize use of resources. If access to the requested resource is allowed, the resource user identification information is stored in an 'approved entity' table. A login is then allowed by the resource user to the selected resource*) and

"after an access request data is sent with said user ID from a second one of the information resource management devices" (Pherson, Abstract, i.e., *Resource users that have not previously logged in to a particular resource supply identification information to the resource provider, which places the information in a 'not yet approved entity' table. The 'not yet approved entity' table is made available to a*

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management station. An administrator, using the management station, then determines whether to authorize use of resources. If access to the requested resource is allowed, the resource user identification information is stored in an 'approved entity' table. A login is then allowed by the resource user to the selected resource).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the computer system of Dettinger to add the feature of having the user supply ID information along with access request in order to access a resource, so that, in the resultant computer system, users would be required to supply ID information before any access. One would have been motivated to do so in order to improve security access control to guarantee data integrity (Pherson, paragraph 0016), which is a well known practice in the art.

As per claim 21, Dettinger in view of Pherson teaches the limitation:

"wherein if the data of the instruction to copy is used by the client computer that is coupled directly to the second information resource management device, the access history management device sends an instruction for data replication" (Dettinger, Paragraph 0021, i.e., comprising a receiving server 126₁, 126₂, . . . 126_N (collectively referred to as the receiving servers 126); Paragraph 0026, i.e., frequency of use; and Paragraph 0026-0027, i.e. the replication schedule may be automatically generated by the access manager 109 according to the rules 110 and the metrics contained in the log 111).

As per claim 22, Dettinger in view of Pherson teaches the limitation:

"wherein said access history management device collects the access history information from the plurality of the information resource management devices at a predetermined timing that includes timing at predetermined intervals set in advance"

(Figure 1A: Access Manager 109; Paragraph 0025, i.e., *To this end, various information (referred to herein as "access manager metrics) is recorded by access manager 109 in a log 111; Paragraph 0027, i.e., the replication schedule may be automatically generated by the access manager 109 according to the rules 110 and the metrics contained in the log 111; and Paragraph 0027, i.e. For example, a database administrator for the server 102 may desire to schedule replication for off-hours in order to minimize network load).*

As per claim 23, Dettinger in view of Pherson teaches the limitation:

"wherein said access history management device collects the access history information from the plurality of the information resource management devices at a predetermined timing that includes an arbitrary timing depending on said information resource management devices" (Figure 1A: Access Manager 109; Paragraph 0025, i.e., *To this end, various information (referred to herein as "access manager metrics) is recorded by access manager 109 in a log 111; Paragraph 0027, i.e., the replication schedule may be automatically generated by the access manager 109 according to the rules 110 and the metrics contained in the log 111; and Paragraph 0027, i.e. For*

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example, a database administrator for the server 102 may desire to schedule replication for off-hours in order to minimize network load).

As per claim 25, Dettinger in view of Pherson teaches the limitation:

"wherein said copy instruction is sent to second information management device (Dettinger, Paragraph 0021, i.e., *comprising a receiving server 126₁, 126₂, . . . 126_N (collectively referred to as the receiving servers 126)*); Paragraph 0033, i.e., *the server 102 notifies the client 120 of the replication and the replication schedule as 113, as indicated by step 234 and The client notification may be handled in any of a variety of methods. For example, in one embodiment the client 120 is notified by email. In another embodiment, the notification is provide to a user as an on-screen message upon attempting to access the primary database 104; Paragraph 0010, i.e., automatically replicating source data from a source data to target databases; Paragraph 0023, i.e., Storage 118 is preferably a direct access storage device (DASD), although it is shown as a single unit, it could be a combination of fixed and/or removable storage devices, such as fixed disc drives, floppy disc drives, tape drives, removable memory cards, or optical storage. Memory 117 and storage 118 could be part of one virtual address space spanning multiple primary and secondary storage devices).*

Claim 28 is rejected on the same basis as claim 19.

Claim 29 is rejected on the same basis as claim 19.

Claim 30 is rejected on the same basis as claim 22.

Claim 31 is rejected on the same basis as claim 23.

Claim 33 is rejected on the same basis as claim 25.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dettinger in view of Pherson and further in view of Pudipeddi et al., (hereinafter "Pudipeddi") (U.S. Patent Application Publication Number 2002/0147881).

As per claim 20, Dettinger in view of Pherson does not explicitly teach the limitation:

"wherein if the data of the instruction to copy is not used by the client computer that is coupled directly to the information resource management device that receives the instruction to copy, the access history management device sends an instruction for data migration".

Pudipeddi teaches the limitation:

"wherein if the data of the instruction to copy is not used by the client computer that is coupled directly to the information resource management device that receives the instruction to copy, the access history management device sends an instruction for data migration"(Paragraph 0007, i.e., *migrate all files that have not been used for six months*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of migrating data that has not been used, as taught by Pudepeddi, to the system of Dettinger in view of Pherson so that, in the

resultant system, if the data of the instruction to copy is not used by the client computer that is coupled directly to the information resource management device, the access history management device sends an instruction for data migration. One would have been motivated to do so in order to so because migration of data that is not used is notoriously well known in the art.

9. Claim 26 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dettinger in view of Pherson and further in view of Jones et al., (hereinafter "Jones") (U.S. Patent Application Publication Number 2002/0169794).

Referring to claim 26, Dettinger in view of Pherson teaches the limitation:
"wherein said instruction is sent any of said information resource management devices coupled to one of the storage devices storing the data of the instruction to copy" (Dettinger, Paragraph 0021, i.e., *comprising a receiving server 126₁, 126₂, . . . 126_N (collectively referred to as the receiving servers 126)*); Paragraph 0033, i.e., *the server 102 notifies the client 120 of the replication and the replication schedule as 113, as indicated by step 234 and The client notification may be handled in any of a variety of methods. For example, in one embodiment the client 120 is notified by email. In another embodiment, the notification is provide to a user as an on-screen message upon attempting to access the primary database 104; Paragraph 0010, i.e., automatically replicating source data from a source data to target databases; Paragraph 0023, i.e., Storage 118 is preferably a direct access storage device (DASD), although it is shown*

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as a single unit, it could be a combination of fixed and/or removable storage devices, such as fixed disc drives, floppy disc drives, tape drives, removable memory cards, or optical storage. Memory 117 and storage 118 could be part of one virtual address space spanning multiple primary and secondary storage devices).

Dettinger in view of Pherson does not explicitly teach the limitation: "the shortest network distance from a storage device".

Jones teaches the limitation:

"wherein said storage device before the change has the shortest network distance from a storage device after the change" (Paragraph 0010-0013). Jones teaches redundancy systems and methods in communication systems, wherein Open Shortest Path First Protocol (OSPF) is disclosed, which is used to provide shortest network paths (shortest network distance) (Paragraph 0010-0013).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the feature of using Open Shortest Path First Protocol (OSPF) as taught by Jones et al. with the device for database replication as taught Dettinger in view of Pherson, so that, in the combined device, the storage device before the change would have the shortest network distance from the storage device after the change. One would have been motivated to do so simply to provide *redundancy to ensure that routing information can be provided upon demand* (Jones, Paragraph 0011).

Claim 34 is rejected on the same basis as claim 26.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30AM-5:30PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-5629.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dennis Myint
Examiner
AU-2162


SHAHID ALAM
PRIMARY EXAMINER